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Atty. Docket No.: P67552US0

***REMARKS***

The Final Office Action mailed May 7, 2009, has been carefully reviewed; claims 15, 19-28, 30 and 32-36 are pending in the application. Claims 15, 27, 28 and 30 are independent. Claims 24, 25 and 28 have been withdrawn.

To facilitate prosecution, Applicants requested an interview which was conducted with Examiner Dinh by telephone on October 1, 2009. Applicants were represented by Suzin Bailey. Applicants sincerely thank Examiner Dinh for his time and cordiality in conducting the interview.

In the Final Action, the Examiner maintained his rejection of claims 15, 19, 21-23, 26, 27, 30 and 32-36 under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,234,423 to Hirahara et al. ("Hirahara") in view of U.S. Patent No. 5,224,670 to Padden. Also under 35 U.S.C. 103(a), the Examiner maintained his rejection of claim 20 as being unpatentable over Hirahara and Padden and further in view of U.S. Patent No. 3,102,559 to Koppelman et al. During the interview, Hirahara and Padden were discussed, with general respect to claim 15, which discussion will now be summarized hereinafter.

In the Final Action, the Examiner stated that "Hirahara discloses a fitting (13 made up of parts 13a,b)". According to

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Hirahara, however, the component "13" is a composite material spar 13 composed of flanges 13a and a web 13b (see column 5, lines 23-25). Further, the spar 13 *is part of the box-airfoil structure 10* which also includes a composite material upper skin 11, a composite material lower skin 12, ribs 14 and an elongate projection 15 (see column 4, lines 50-60). The hinges shown in Figures 1 and 2 of Hirahara, which are elements not identified by a reference numeral but which project outwardly from the spar web 13b, are not discussed in Hirahara at all.

Having categorized the spar 13 as a "fitting", the Examiner made reference to the annotated version of Figure 1 of Hirahara appearing on page 5 of the Office Action, where the Examiner identified the hinge as being an "extending arm" of the fitting. As confirmed during the interview, the Examiner considers the hinge, i.e., the unnumbered element shown in Figures 1 and 2 of Hirahara, to be part of the overall structure identified by reference numeral "13". The basis for this conclusion is that reference numeral "13" has an arrowed lead line that points at the spar. Since the hinge is positioned between the arrow and the spar, the Examiner has concluded that the hinge is also part of the overall component identified as "13".

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The Examiner's conclusion regarding the inclusion of the hinges as part of "13" disregards the clear teaching of Hirahara, however, which states that "13" is a spar and that the spar 13 only includes the flanges 13a and the web 13b. There is nothing in Hirahara to support the Examiner's conclusion other than this single arrowed lead line in Figure 1.

That the spar only includes the flanges 13a and the web 13b is, however, supported at multiple places in Hirahara. For example, and as discussed during the interview, Figures 9 and 14 of Hirahara illustrate the same arrowed lead line in connection with which reference numeral 13 clearly designates only the flanges 13a and web 13b as making up the spar 13; no hinges are shown and yet "13" is used in precisely the same manner as in Figure 1. Further, Figures 9 and 14 support the description in Hirahara at column 6, lines 49-51, stating that "the spar 13 is formed into a U-shaped cross-sectional shape", as is clearly depicted not only in Figures 9 and 14, but also in the alternate embodiment shown in Figure 16 as well (see also column 5, lines 23-25; and column 6, lines 6-10, describing the U-shaped cross-sectional shape of the spar).

Further evidence that the spar does not include the hinges is provided by the manner of making the spar, as shown in Figures 11 and 12. In forming the spar, a laminate of composite

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prepreg is formed into the illustrated *U-shaped cross sectional shape* and molded under heat (see column 5, lines 33-36; column 6, lines 6-11). Since the U-shaped spar is produced by laminating composite prepreg, it is clear that the hinges are not made by the same process.

Nonetheless, it was Applicants' understanding from the interview that the Examiner considers the hinge, i.e., the protruding or "extending arm" of the annotated Figure 1, to be made of the same material as the spar 13. Respectfully, and for the reasons set forth above, Applicants maintain that there is no evidence to support the Examiner's position, either within Hirahara or Padden.

That the hinges are not addressed at all in Hirahara was substantiated by Helmut Kaufmann in his declaration filed on August 2, 2007, in this application ("Mr. Kaufmann's 2007 Declaration"), which the Examiner is requested to review. In paragraph 8 thereof, Mr. Kaufmann states, "To the best of my understanding upon review thereof, Hirahara does not address the hinges at all, but only methods of forming the box structure [10] of the movable surface." In view of Mr. Kaufmann's considerable expertise in the art, his conclusion that Hirahara "does not address the hinges at all" should surely bear weight in reassessing and reaching an accurate

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determination of what is, in fact, taught by Hirahara concerning the hinges.

To conclude, since the spar 13 does not include the hinges, but only components 13a and 13b, Hirahara does not disclose a *fitting* having at least one outwardly extending arm with an aperture and bearing surface as set forth in each of claims 15, 27 and 30. Further, the hinges of Hirahara which are used to connect the spar to the aircraft structure *are not made, nor disclosed as being made, of a composite material at all*. This fact was discussed in detail in Mr. Kaufmann's 2007 Declaration (see particularly, paragraphs 8-12). And there is nothing in Hirahara to suggest that the hinges, which are not part of Hirahara's invention and certainly are not identified as being a structural component of the spar, are anything other than conventional metal connectors.

Finally, Padden shows mounting fittings 4, 5, 6 and 25, 26 and 27 which are made of metal, and preferably made of aluminum (see column 4, lines 9-11). As can be clearly seen in Figure 2 of Padden, the fittings, which are made of metal, are connected to the movable part or spoiler with rivets or the like. Thus, there is nothing to suggest a fitting made of composite material by a resin transfer molding (RTM) method as claimed by the present invention.

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In view of the foregoing, favorable reconsideration and allowance of the pending claims is requested.

Should the Examiner have any questions or comments, the Examiner is cordially invited to telephone the undersigned attorney so that the present application can receive an early Notice of Allowance.

Respectfully submitted,  
JACOBSON HOLMAN PLLC

By *Harvey B. Jacobson, Jr.* 40,495  
for Harvey B. Jacobson, Jr.  
Reg. No. 20,851

400 Seventh Street, N.W.  
Washington, D.C. 20004-2201  
Telephone: (202) 638-6666  
Date: October 7, 2009  
HBJ:SCB  
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